

137-58-6-11321

Conditions for the Efficient (cont.)

hydroxide on the industrial properties of Ca hydroxide, the influence of time of contact of solutions of Zn sulfate and Ca hydroxide on the chemical reaction between them, and the conditions for efficient employment of activators in the zinc flotation cycle. Bibliography: 18 references.

A.Sh.

1. Ores--Processing
2. Ores--Flotation
3. Copper sulfates--Applications
4. Zinc sulfates--Applications

Card 2/2

137-58-6-11322

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 6, p 9 (USSR)

AUTHORS: Kakovskiy, I.A., Nagirnyak, F.I., Vershinin, Ye.A.

TITLE: A Comparative Technological Evaluation of the Collecting Properties of Dithiophosphates and Xanthogenates on Flotation in Acid Media (Sravnitel'naya tekhnologicheskaya otsenka sobiratel'nykh svoystv ditiofosfatov i ksantogenatov pri flotatsii v kisloy srede)

PERIODICAL: V sb.: Usloviya raskrytiya i razdeleniya mineralov rud tsvetn. met. Sverdlovsk, 1957, pp 68-90

ABSTRACT: Theoretical data descriptive of the technological properties of collectors and the conditions for their use form the basis of a hypothesis to the effect that on flotation in a weakly acid medium a definite possibility exists of obtaining greater efficiency by employing collectors with shorter hydrocarbon chains, and that consumption thereof would be lower than that in basic mediums and also lower than that of collectors with longer hydrocarbon chains. In other words, the weaker the collector, the more efficient will be its action in a weakly acid medium. The object of the given study is to seek experimental confirmation for this

Card 1/2

137-58-6-11322

A Comparative Technological (cont.)

theoretical proposition and to justify the necessity of the practical employment of weak and selective collectors in the flotation of hard-to-concentrate complex pyrite ores in weakly acid mediums. The question of the advantage of flotation of refractory ores in acid mediums is also posed. The following collectors are investigated: ethyl and butyl frothers, ethyl and butyl xanthogenates, the quantities employed being 5-45 g/t ore. The Cu-Zn ore of the Degtyar deposit is investigated. In all experiments, the quality of the concentrates derived was higher when weaker collectors were employed. This is emphasized by their superior selective properties and higher efficiency, which is confirmed by the higher percentage of recovery attainable in weakly acid medium with small consumptions of the weak collector. Thus, weak collectors with an increased number of radicals in the molecule are recommended. The superiority of dithiophosphates as collectors for flotation in weakly acid mediums is demonstrated.

A.Sh.

1. Ores--Flotation 2. Dithiophosphates--Effectiveness 3. Xanthogenates
--Effectiveness

Card 2/2

Translation from: Referativnyy zhurnal Metallurgiya, 1958, Nr 12, p 4 (USSR) SOV/137-58-12-23936

AUTHOR: Nagirnyak, F. I.

TITLE: Improving the Quality of Pyrite Concentrates for Use as Raw Materials in the Chemical Industry (Povysheniye kachestva piritnykh kontsentratsiy kak syr'ya dlya khimicheskoy promyshlennosti)

PERIODICAL: Tr. N.-i. i proyekt. in-ta "Uralsmekhanobr", 1957, Nr 1, pp 116-128

ABSTRACT: A uniform system of bringing pyrite concentrates to the required 50% S content condition is recommended for all the Urals plants. The flowsheet includes thickening to 70-75% solids so as to discard excess Ca(OH)_2 as waste tailings, dilution of the thickened product with fresh water until solids constitute 25-30%, so as to diminish CaO concentration to 50-100 g/m³, a primary pyrite flotation with addition of collector and frother, a secondary flotation with return of the tailings thereof to the start of the primary pyrite flotation. A list of the recommendations for the Krasnoural'sk, Sredneural'sk, Kirovograd, and Karabash dressing mills is provided.

L. B.

Card 1/1

NAGIRNYAK, F.I.

136-6-2/26

AUTHOR: Nagirnyak, F.I. and Vershinin, Ye.A.

TITLE: Conditions for Opening and Separating Minerals of Metamorphosed Ores of the Degtyarka Deposit. (Usloviya raskrytiya i razdeleniya mineralov metamorfizovannykh rud Degtyarskogo mestorozhdeniya)

PERIODICAL: Tsvetnyye Metally, 1957, No.6, pp. 12-17 (USSR)

ABSTRACT: All rocks in the Degtyar deposit were subjected in their geological history to intensive re-crystallisation with decrease in volume. One of the reasons for low extractions obtained in the selective flotation of ores from this deposit is insufficiently fine sub-division and the presence of very thin layers of chalcopyrite and sphalerite on the pyrite grains. The authors point out that neglect of these peculiarities has led to erroneous statements on the optimal degree of sub-division by the Uralmekhanobr, Mekhanobr and Gintsvetmet organisations and the research laboratory of the Sredneuralskiy Copper-smelting Works (Sredneuralskiy Medopravilnyy Zavod). They cite tables of results obtained by L.I. Soldatenkova under the direction of G.A. Yarzhemskaya on the distribution of copper sulphides, sphalerite and pyrite between free grains and concretions for various degrees of sub-division. Results obtained by Dolivo-Card 1/2 Dobrevol'sky and Merlina [Ref. 6] on the contents and distri-

AUTHORS: Magirnyak, F.I. and Belykh, P.F. 13-11-1/17

TITLE: Conditions for De-coppering Zinc Concentrates at Ural
Beneficiation Plants (Usloviya obozmezhivaniya tsinkovykh
kontsentratov na Ural'skikh obogatitel'nykh fabrikakh)

PERIODICAL: Tsvetnyye Metally, 1957, No.11, pp. 1 - 6 (USSR).

ABSTRACT: The authors discuss the purity of zinc concentrates at the Chelyabinsk Beneficiation Plant (Chelyabinskiy zavod), giving data on the actual and desirable impurity levels. It is concluded that these should not exceed present levels and ways of ensuring this in view of expected deterioration of concentrates are considered. The laboratory-scale work of the Uralsmekhanobr organisation is described which aimed at extracting copper from the concentrate into a workable copper-zinc product. The three concentrates studied contained excessive concentrations of zinc (over 41%) and copper (over 2.5%) and one also of arsenic (0.1%). Mineralogical investigation showed that the copper and zinc minerals are mainly in the form of free grains. The method of treatment adopted included preliminary reaction with sodium sulphide and washing with water, followed by thickening and flotation of copper - as developed by Engineer L. Debrivna at the Mekhanobr Institute. As a result of closed-cycle control experiments, a simplified scheme was developed (Fig.3) in which.

Card 1/2

136-11-1/10
Conditions for De-coppering Zinc Concentrates at Ural Beneficiation Plants

the sodium-sulphide treatment, washing and thickening are combined. This scheme was shown to secure the desired results. For its adoption thickening installations both for the treated zinc concentrates and the resulting copper-zinc product would be needed; existing plant would be suitable for the sodium-sulphide treatment and the thickening of zinc concentrate before separation of the copper-zinc product, but flotation and reaction tanks would be required.

There are 3 figures and 6 tables

ASSOCIATION: Uralsmekhanoobr

AVAILABLE: Library of Congress

Card 2/2

1. Copper zinc alloys-Separation
2. Sodium sulfides-Application
3. Sodium sulfides-Reactions

NAGIRNYAK, F. I.

137-1958-1-75

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 1, p 13 (USSR)

AUTHORS: Sagradyan, A. L., Nagirnyak, F. I., Nasedkina, Ye. P.

TITLE: Industrial Experience in Perfecting the Use of Selective Flotation of the Copper-Zinc Ores of the Novo-Sibayevsk Deposits
(Promyshlennyy opyt ~~osvoyeniya~~ selektivnoy flotatsii medno-tsinkovoy rudy Novo-Sibayevskogo mestorozhdeniya)

PERIODICAL: Byul. tsvetn. metallurgii, 1957, Nr 11-12, pp 33-38

ABSTRACT: A procedure has been developed and perfected to assure attainment of the planned level of ore crushing prior to copper flotation. In accordance with the plans for completing the equipment of Nr 3 section, de-sliming has been introduced into the ore-dressing procedure. The most important special feature of the use of reagents in the flotation is that the ore is crushed in a weakly alkaline medium containing not more than 5 to 15 g/m³ of CaO in the classifier tailings. Depression of ZnS and FeS₂ is accomplished by feeding Na₂S, ZnSO₄ and NaCN into the crushing process, the bulk of the depressors being delivered at the moment when the grains are initially unlocked. When the process has attained

Card 1/2

137-1958-1-75

Industrial Experience in Perfecting the Use of Selective Flotation (cont.)

stability, lower amounts of NaCN should be charged. The Na_2S has to be metered throughout the process, as its consumption depends upon the content of water-soluble salts in the ore. The best collector proved to be butyl aeroflot in a mixture with butyl xanthogenate. The production indices were greatly influenced by the sequencing procedure used in turning on the flotation machines, the rate of output of the various sections, and the composition of the ore. When the procedure involving use of hydrocyclones using middlings from bowl-type classifiers was used, the hydrocyclone product sizes for feed to the flotation process corresponded to the design specification - 200 mesh.

A. Sh.

1. Copper ores--Flotation 2. Zinc ores--Flotation 3. Ores
--Processing

Card 2/2

NAGIRNYAK, F.I.; BELYAKH, P.F.

Conditions for decoppering zinc concentrates in Ural ore-dressing
plants. TSvet. met. 30 no.11:1-6 N '57. (MLRA 10:11)

1. Uralmekhanobr.

(Copper--Metallurgy) (Zinc--Metallurgy)

NAGIRNYAK, F. I. (Uralsmekhanoobr)

"The complex utilisation of low-grade copper-zinc ores"

report presented at the 4th Scientific and Technical Session of the Mekhanoobr
Inst, Leningrad, 15-18 July 1958

НАГИРНЫЙ, F. I.

136-1-5/20

AUTHORS: Potashnikov, M.M., Nagirnyak, F.I., Ostroukhov, S.N. and Bagina, L.I.

TITLE: Flotational Properties of Heavy Pyridine Bases (Flotatsionnye svoystva tyazhelykh piridinovykh osnovaniy)

PERIODICAL: Tsvetnye Metally, 1958, No.1, pp. 18 - 23 (USSR)

ABSTRACT: The authors give the results of their investigations on the influence of the different components of heavy pyridine bases on their flotational properties. Their claim that nothing on this subject has appeared in literature is commented on in an editorial note, drawing their attention to the reports of the Gintsvetmet organisation on its work in 1947-1952. The materials studied consisted of works' samples of heavy pyridine bases separated from the naphthalene and absorption fractions of coal tar and the authors tabulate their properties and the fractional composition and contents of different components; pronounced differences are evident. They go on to describe laboratory-scale experiments on the foam-producing properties of the bases in various stages of purification (Table 2), using 45 g of base per ton of the copper ore treated at the Sredneurak'sk Works (Sredneural'skaya obogatitel'naya fabrika), the experiments being carried out in the works laboratory under the direction of A.L. Sagradyan. These showed that the most

Card 1/2

Flotational Properties of Heavy Pyridine Bases

136-1-5/20

promising were the bases of the main naphthalene fraction purified by distillation and the removal of their light components (boiling away up to 200 °C) and of the main absorption fractions purified by distillation. Finally, the authors describe full-scale tests at the Sredneural'sk Works with heavy pyridine bases from the Nizhne-Tagil'sk By-product Coking Works (Nizhne-Tagil'skiy koksokhimicheskiy Zavod). The properties of the bases are tabulated (Table 3) and the flotation results are compared with those obtained using "Belleskhimprom" pine oil. Copper Staryy Sibay and copper-zinc Novyy Sibay ores were used and comparative tests with cresol were also carried out with the latter. It appears that pine oil and cresol can be replaced for the flotation of sulphide-copper and copper-zinc, respectively, by a cheaper foaming agent, distilled pyridine bases from the absorption fraction of coal tar. There are 5 tables, 1 Russian and 1 Polish reference.

ASSOCIATION: VUKhIN and Uralmekhanobr

AVAILABLE: Library of Congress
card 2/2

SOV/136-58-6-10/21

AUTHORS: Nagirnyak, F.I. and Vershinin, Ye.A.

TITLE: Large-scale Laboratory Tests on the Collective-selective Flotation of Degtyarskoye-deposit Ores (Ukrupnenno laboratornyye 'sytaniya kollektivno-selektivnoy flotatsii rud Degtyarskogo mestorozhdeniya)

PERIODICAL: Tsvetnyye Metally, 1958, Nr 6, pp 57 - 61 (USSR)

ABSTRACT: Laboratory work on the development of a new process for the collective-selective flotation of metamorphised pyrite ores from the Degtyarskoye deposit was completed in 1956 at the "Uralmekhanobr" Institute (Ref 1). It has been shown (Ref 3) that the extraction of minerals from these ores is hindered by the presence of very thin chalcopyrite films on the pyrite grains and that (Refs 1, 4) the process can be facilitated by the presence of a grinding medium. On the continuous large flotation unit (40 kg/h) (Figure 1) at the Institute, the ore was used as its grinding medium. A high metal recovery was secured by using a weakly acid medium in the main and a weakly alkaline in the control flotation: a pH of over 7.0 was corrected with Na_2SiF_6 added to the primary grinding mill. In the zinc cycle of flotation activation of sphalerite

Card1/3

SOV/136-58-6-10/24
Large-scale Laboratory Tests on the Collective-selective Flotation
of Degtyarskoye-deposit Ores

was effected with the complex ion $\text{Cu}(\text{NH}_3)_4^{2+}$ and suppression of pyrite with a high-alkali lime liquid, cyanide and the activated charcoal required to remove excess foaming agent from the solution. The results obtained (Tables 2, 3) with the sizing of the flotation feed used (Table 1) using the flowsheet (Figure 2) showed that: a copper concentrate (13.03% Cu, 7.36% Zn) with a recovery in it of 84.50% of the copper contained in the ore could be obtained; the zinc concentrate obtained (1.25% Cu, 46.60% Zn) represented a recovery of 40.20% of the zinc in the ore, while for the pyrite concentrate (46.90% S) the S recovery figure was 78.70%. An editorial note suggests that in view of the high reagent consumption and other disadvantages involved in the proposed method, its further evaluation is desirable.

Card 2/3

SOV/136-58-6-10/21

Large-scale Laboratory Tests on the Collective-selective Flotation
of Degtyarskoye-deposit Ores

There are 2 figures, 3 tables and 5 Soviet references.

ASSOCIATION: Uralmekhanobr

Card 3/3

NAGIRNYAK, F.I.; POPOVA, V.N.

Over-all utilization of ores of the Gaiskoye deposits. Biul.TSIIN
tsvet.met. no.10:10-13 '58. (MIRA 11:9)
(Ural Mountain region--Copper mines and mining)

ABRASHKEVICH, Vsevolod Markovich; NAGIRNYAK, F.I., red.;
SKOROBOGACHEVA, A.P., red.izd-va; MATLYUK, R.M., tekhn.red.

[Practice in increasing the efficiency of ore dressing]
Praktika povysheniia effektivnosti obogashcheniia rud.
Sverdlovsk, Metallurgizdat, 1959. 21 p. (MIRA 17:2)

NAGIRNYAK, F.I.; POPOVA, V.N.

Increasing the recovery and the quality of concentrates
in the flotation of Blagodatnoye deposit ores. Trudy
Uralmekhanobra no.5:31-52 '59. (MIRA 15:1)
(Blagodatnoye (Bashkiria)—Gold ores)
(Flotation)

SOV/136-59-7-4/20

AUTHORS: ~~Nagirnyak, P.I.~~, Nikitin, Yu.I.

TITLE: Results of a Study of Density-Pulsations in Mechanical-Classifier Overflow

PERIODICAL: Tsvetnyye metally, 1959, Nr 7, pp 20-22 (USSR)

ABSTRACT: The authors noticed that in mechanical classifiers the constancy of the process is periodically interrupted by the discharge of accumulations of limiting-size grains. They now present the results of their investigations on a two-spiral classifier (spiral diameter 2m) and a pan classifier at the Sredneural'skiy obogatitel'nyy zavod (Sredneural'sk Beneficiation Works) with Degtyarskoye deposit's copper pyritic ores. Samples were taken at 1-minute intervals across the whole discharge stream, the duration of an experiment being 30 min. The percentage content of -0.074 mm particles and of solid in the spiral-classifiers overflow are shown as functions of time of sampling, min, (curves 1 and 2, respectively) in Fig 1; the corresponding curves for the pan classifiers are shown in Fig 2. A more detailed picture of the pan classifiers results (percentages

Card 1/2

SOV/136-59-7-4/20
Results of a Study of Density-Pulsations in Mechanical-Classifier
Overflow

of -0.13 ± 0.074 and -0.208 ± 0.13 mm, percentage solid) is given in Fig 3: this shows that the coarser-particle contents are especially subject to periodic fluctuations. The periodic rise and fall in the solid content occurs within the ranges 5-7%. It has been shown experimentally that hydrocyclones are not subject to these deleterious effects. The authors attribute this to the considerable excess of centrifugal over gravitational forces on particles. They recommend the use of hydrocyclones. There are 3 figures.

ASSOCIATION: Uralmekhanobr

Card 2/2

BABADZHAN, A.A., kand.tekhn.nauk; VETRENKO, Ye.A., kand.tekhn.nauk;
MAGIRNYAK, F.I., kand.tekhn.nauk; EBERGARDT, M.S., red.izd-va;
IZMODENOVA, L.A., tekhn.red.; SEREDKINA, N.F., tekhn.red.

[Complete utilization of copper-zinc ores and concentrates]
Kompleksnoe ispol'zovanie medno-tsinkovykh rud i kontsentratov.
Sverdlovsk, Akad.nauk SSSR, Ural'skii filial, 1960. 169 p.
(14:1)

1. Nauchno-tekhnicheskoye obshchestvo tsvetnoy metallurgii.
Ural'skoye otdeleniye. 2. Institut "Unipromed" (for Babadzhan).
3. Ural'skiy filial AN SSSR (for Vetrenko). 4. Institut "Ural-
mekhanobr" (for Magirnyak).
- (Copper ores) (Zinc ores)

AVILOVA, T.P., kand.khim.nauk; NAGIRNYAK, F.I., kand.tekhn.nauk

Effect of a mixture of alcohols and xanthates on the flocculation of galena. Izv. ys. ucheb. zav.; gor. zhur. no. 4:152-156 '61.

(MIRA 14:6)

1. Rekomendovana kafedroy khimii Severdlovskogo gornogo instituta imeni V.V.Vakhrusheva. 2. Sverdlovskiy gornyy institut imeni V.V. Vakhrusheva (for Avilova). 3. Institut Uralmekhanobr (for Nagirnyak).

(Flotation) (Galena)

DMITRIYEV, Yu.G.; IZMODENOV, A.I.; IZMODENOV, Yu.A.; KVASKOV, A.P.
NAGIRNYAK, F.I.

Magnetizing roasting of Lisakovskoye deposit ores without a reducing agent. Gor zhur. no. 6:57-60 Je '61. (MIRA 14:6)
(Kustanay region--Iron ores)
(Ore dressing)

AVSARAGOV, B.G.; NAGIRNYAK, F.I.; STEPANOV, B.A.

Ways to increase the complete utilization of copper and copper-zinc
pyrites of the Southern Urals. TSvet. met. 34 no. 4:1-3 Ap '61.
(MIRA 14:4)

(Ural Mountains—Pyrites)

GOLIKOV, A.A.; NAGIRNYAK, F.I.

Catalytic oxidation of xanthates in aqueous solutions in presence
of sulfide minerals. TSvet. met. 34 no. 4:9-11 Ap '61.
(MIRA 14:4)

1. Uralmekhanobr.

(Flotation--Equipment and supplies)

GOLOMZIK, A.I.; GOLIKOV, A.A.; NAGIRNYAK, F.I.

Potentialities for improving the quality of concentrates and
increasing metal recovery in dressing Ural Mountain pyrite ores.
TSvet. met. 35 no.4:4-7 Ap '62. (MIRA 15:4)
(Ural Mountains--Pyrites) (Ore dressing)

IVANOV, V.I.; NAGIRNYAK, F.I.

Accelerating the leaching of copper sulfide minerals by sulfur
bacteria. TSvet.met. 35 no.8:30-36 Ag '62. (MIRA 15:8)
(Copper sulfide) (Leaching) (Bacteria, Sulfur)

AVDYUKOV, V.I.; KVASKOV, A.P.; NAGIRNYAK, F.I.

Use of silicon fluorides in the flotation of hematite and magnetite.
Gor. zhur. no.6:76 Je '63. (MIRA 16:7)

1. Ural'skiy nauchno-issledovatel'skiy institut mekhanicheskoy
obrabotki poleznykh iskopayemykh, Sverdlovsk.
(Flotation) (Hematite) (Magnetite)

GOLIKOV, A.A.; NAGIRNYAK, F.I.

Conditions for an effective depression by cyanide during the
selective flotation of sulfide minerals. TSvet. met. 36 no.1:
5-10 Ja '63. (MIRA 16:5)
(Flotation—Equipment and supplies)

OKUNEV, A.I.; SHUGOL', L.S.; NAGIRNYAK, F.I.; FRIDMAN, S.E.; GAGARIN, E.S.

Collective and selective magnetic separation of cinder from the
zinc industry. TSvet. met. 36 no.1:30-35 Ja '63. (MIRA 16:5)
(Magnetic separation of ores) (Zinc industry--By-products)

LEBEDEV, A.V.; POLETAYEV, V.A.; GOLIKOV, A.A.; NAGIRNYAK, F.I.

UMK-500 flotation machine. TSvet. met. 36 no.9:11-14 S '63.
(MIRA 16:10)

ADAMOV, E.V.; KISLYAPIN, L.D.; NASHENYAK, F.I.; TROITSKIY, A.V.,
otv. red.

[Ore dressing practices for nonferrous, rare, and noble
metals] Praktika obogatsheniia rud tsvernykh redkikh i
blagorodnykh metallov na fabrikakh SSSR. Moskva, Izd-vo
"Metallurgiya," 1964. 238 p. (MIRA 17:8)

1. Ural'skiy nauchno-issledovatel'skiy institut mekhanicheskoy obrabotki poleznykh iskopayemykh.

ADAMOV, E.V.; KISLYAKOV, L.D.; NAGIRNYAK, F.I.; TROITSKIY, A.V.,
otv. red.

[Practice of dressing ores of nonferrous, rare and noble
metals in the factories of the U.S.S.R.] Praktika oboga-
shcheniia rud tsvetnykh, redkikh i blagorodnykh metallov
na fabrikakh SSSR. Moskva, Nedra, 1964. 238 p.

(MIRA 18:7)

1. Sverdlovsk. Nauchno-issledovatel'skiy i proyektnyy
institut obogashcheniya i mekhanicheskoy obrabotki polez-
nykh iskopayemykh.

YELISEYEV, N.I.; NAGIRNYAK, F.I.

Oxidation kinetics of sodium sulfide in a suspension of
galenite. TSvet. met. 38 no.134-7 Ja '65 (MIRA 1832)

STEPANOV, B.A.; IVANOV, V.I.; GOLOMZIK, A.I.; NAGIRNYAK, F.I.

Microbiological leaching of sulfide ores. Fiz.-tekhn. probl.
razrab. pol. iskop. no.4:118-121 '65. (MIRA 19:1

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PIAKIN, I.M.; YERISEYEV, N.I.; MAGIENYAK, F.I.

Role of bivalent cations in the flotation of minerals. *Probl. razrab. pol. iskop.* no.5:139-143 1975. (21) 141

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 IVANITSKIY, I.V.[Ivanyts'kyi, I.V.]; KOZAK, V.Ye.;
 BORYAKIN, V.M., red.izd-va; NESTERENKO, O.O., glav. red.;
 DAKHNO, Yu.B., tekhn. red.

[National income of the Ukrainian S.S.R. during the period
 of the large-scale building of communism] Natsional'nyi
 dokhod Ukrain's'koi RSR v period rozhornutoho budivnytstva
 kommunizmu. Red.kol.: O.O.Nesterenko ta inshi. Kyiv, Vyd-
 vo AN URSR, 1963. 333 p. (MIRA 16:12)

1. Akademiya nauk URSR, Kiev. Instytut ekonomiky.
 (Ukraine--Income)

NAGIRNYAK, Ye

USSR / General and Special Zoology. Insects. Harmful
Insects and Arachnids. Pests of Grain Crops. P

Abs Jour: Ref Zhur-Biol., No 14, 1958, 64017.

Author : Nagirnyak, Ye.; Smirnova, V.

Inst : Not given.

Title : The Effectiveness of Chemical Methods in Con-
trolling The Grain Beetle.

Orig Pub: Zemledeliye i zhivotnovodstvo Moldavii, 1957,
No 5, 74-75.

Abstract: Effective methods of prevention and control of
the beetles in Moldavia: prohibiting the plant-
ing of winter wheat (W.) 2-3 years consecutively
on one field; quick and careful clearing of the
fields of straw and chaff remnants after reap-
ing with combine harvesters; in the event of a

Card 1/2

37

NAGIRNYAK, YE. A.

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Zapiski Moldav. Nauch-Issled. Bazy Akad. Nauk SSSR, T. I., Vyp. 1, 1948
S. 151-79 Bibliogr: S 179

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1976

Sadovodstvo V Dnyestrovskikh Ploshnyakh Sad I Ogorod, 1977, No. 9, 5.14-18

SC: DETCHIS NO. 38

S/735/61/000/000/005/014

AUTHORS: Maksimovich, G.G., Yanchishin, F.P., Popovich, V.V., Nagirnyy, S.V., Karpenko, G.V.

TITLE: Machines for micromechanical endurance testing under variable tension in various media.

SOURCE: Akademiya nauk Ukrainiskoy SSR. Institut mashinovedeniya i avtomatiki. Mashiny i pribory dlya ispytaniy metallov. Kiyev, 1961, 41-46.

TEXT: A machine is described in which inertial loading is used in the endurance testing of 1- to 3-mm dia microspecimens in various fluid media. Variable-tension testing methods are described, and test data reported on 1-mm dia steel-45 microspecimens in air, MC (MS) oil activated with 2% oleic acid, and a 3% watery solution of NaCl. Testing of microspecimens is attractive for the determination of the effect of environmental media on the static and cyclic fatigue strength of a material; in smaller specimens the ratio of the surface area to the cross-sectional area is greater than in large specimens. Testing machines for static microspecimen tests have been described elsewhere (cf. Roytman, I.M., Fridman, Ya.B. Mikromekhanicheskiy metod ispytaniya metallov - The micromechanical method of metals testing. Moscow. Oborongiz, 1950. Konoplenko, V.P., et al., Zavodskaya laboratoriya, v.25, no.1, 1959. Regel, V.R., et al., ibid.). Variable-load testing is well known for large specimens, but little has been done for the testing of 1- to 3-mm dia microspecimens because of the difficulties inherent in the over-all precision and especially the exact

Card 1/3

Machines for micromechanical endurance testing... S/735/61/000/000/005/014

centering required. In the authors' machine the specimen (surrounded by a beaker for tests in various fluid media) is suspended from an annular dynamometric holder equipped with surface wire strain gages. A prescribed weight, spring-suspended from the lower end of the specimen, constitutes the static tension load. Also suspended from the lower end of the specimen is a floating frame containing an eccentric weight which is flexible-shaft-driven by a 30-w d.c. motor at 3,000 to 10,000 rpm. A spring parallelogram attached to the vertical machine support absorbs any horizontal component of the vibration, and only the vertical component of the cyclic inertial load is borne by the specimen. A variable resistance in the feed circuit permits programmed variations in the inertial load. The strain-gage readings are taken on an МПО-2 (MPO-2) oscillograph. The annular dynamometer is precalibrated statically. The strain-gage signals are preamplified on a tensometric ТУ-6М (TU-6M) amplifier. All tests were made in tension only, the mean load (equal to the static load) was held constant or varied, and the inertial-load amplitude was held constant or varied. Test data on carbon steel "45" are reported. The static (or mean) tension was $\sigma_m = 29.3 \text{ kg/mm}^2$, the inertial load, with a frequency of 50 and 142 cps, was varied. Fatigue curves are shown. The fatigue limit at high stresses is found to be greater in fluid media than in air. At the 142-cps frequency the fatigue limit in air and in activated oil is attained at $2.5 \cdot 10^7$ cycles. There is no noticeable effect of the activated oil on the fatigue limit on the basis of 10^8

Card 2/3

Machine for micromechanical endurance testing... S/735/61/000/000/005/014

cycles. The NaCl solution produced a continuous impairment of the fatigue limit. At 50 cps an analogous behavior is observed. The endurance limit in air and in activated oil is attained at $8.5 \cdot 10^6$ cycles. NaCl reduces the fatigue limit continuously. There are 3 figures and 6 Russian-language Soviet references.

ASSOCIATION: None given.

Card 3/3

44054

S/676/62/009/000/008/010
A062/A101

AUTHORS: Maksimovich, G. G., Nagirnyy, S. V.

TITLE: Endurance of degassed brass subjected to varying tensions

SOURCE: Akademiya nauk Ukrayins'koyi RSR. Instytut mashynoznavstva i avtomatyky, L'viv. Nauchnyye zapiski. Seriya mashinovedeniya. v. 9, 1962, Voprosy mashinovedeniya i prochnosti v mashinostroyeni, no. 8, 72 - 76

TEXT: A series of tests was carried out to determine the influence of external media and of the degree of zinc evaporation on the fatigue resistance of brass samples, divided into 3 groups. The zinc evaporation from the brass was effected by heating in vacuo (10^{-4} mm Hg) in the following conditions for the 3 groups, respectively: I - $T = 300^{\circ}\text{C}$, $t = 2$ hours; II - $T = 700^{\circ}\text{C}$, $t = 4$ hours; III - $T = 800^{\circ}\text{C}$, $t = 3$ hours. The tests were carried out on micro-machines. The samples were submitted to a varying tensile load. The statical load was determined by the weight of a load attached to the vertically arranged sample, while a sinusoidally varying dynamic load was provided by the rotating

Card 1/2

Endurance of degassed brass...

S/676/62/009/000/008/010
A062/A101

mass of a vibrator. The tests were effected in the following media: 1) the air of the laboratory premises; 2) oil (mark MS) activated by 2% of olein acid; 3) a 3% solution of NaCl; 4) mercury. The results, represented by curves and graphs, give evidence of the following facts: In the first group the endurance of the brass strongly decreases under the influence of mercury, while it is little affected in oil, activated by 2% of olein acid, and in the 3% water solution of NaCl. In the groups II and III, the mechanical characteristics (static strength and fatigue resistance) considerably decrease in comparison with those of group I. In mercury, the resistance to fatigue and the static strength decrease by 46% and 31%, respectively, and the plastic characteristics decrease by as much as 81% (relative lengthening by 81%). The various results are briefly interpreted. There are 3 figures.

SUBMITTED: June 15, 1961

Card 2/2

MAKSIMOVICH, G.G.; YANCHISHIN, F.P.; TKACHENKO, N.N.; MAGIRNYI, S.V.;
BARANETSKIY, V.S.

Effect of round hole type stress concentrators on the mechanical
characteristics of brass. Vliyan. rab. sred na svois. mat. no.2:
56-60 '63. (MIRA 17-10)

MAKSYMOWICZ, G.D.; WAGNER, J.V.

Effect of active liquid media on the fatigue strength
of prestressed concrete beams. W. J. Wagner, J. V. Wagner, Eds.
no. 2, 1970, 100 p. (MIRA 17, 10)

MAKSIMOVICH, G.G.; NAGIRNYI, S.V.; DROZD, N.P.

Effect of circular hole-type stress raisers on the strength of brass
in active media. Vliian. rab. sred na svois. mat. no.3:58-62 '64.
(MIRA 17:10)

NAGIRNYI, V.M.; ZNAMENSKIY, G.N.

Some features of the deposition of zinc and cadmium on various cathodes. Ukr. khim. zhur. 31 no.9:962-965 '65.

(MIRA 18:11)

1. Dnepropetrovskiy khimiko-tekhnologicheskii institut imeni F.E. Dzerzhinskogo.

L 62488-65 EWA(j)/EWT(1)/EWA(b)-2

ACCESSION NR: AP5018031

UR/0343/65/000/007/0042/0043

632.981.2

27

24

B

AUTHORS: Gubarev, M. I.; Nagirnyy, Yu. P.; Sudit, Zh. M.

TITLE: Universal sprayer

SOURCE: Traktory i sel'khoz mashiny, no. 7, 1965, 42-43

TOPIC TAGS: universal sprayer, insect sprayer, agricultural sprayer/ OSV 2.5
universal sprayer, MTZ tractor, MTZ 50 tractor, DT 54A tractor, DT 75 tractor,
T 74 tractor

ABSTRACT: A new universal high performance sprayer (OSV-2.5) which incorporates hydraulic, pneumohydraulic, and "application by wind" spraying has been developed. The sprayer (see Fig. 1 on the Enclosure) is powered by a tractor (MTZ, MTZ-50, DT-54A, DT-75, T-74) drive through coupling 10 and includes an agitator 8, two-speed reducer 4, pumping station 5 (two three-cylinder pumps), alternate blower 6, filters 12, and atomizer 13. By using pumps 5 or blower 6 or both in combination, different spraying regimes can be achieved. The specifications for the OSV-2.5 are as follows: width of spray path = 35-50 m, speed = 3.6-6.7 km/hr, weight = 1320 kg, capacity = 1800 liter, axial blower: 1200 rpm, 88 756 m³/hr,

Card 1/3

L 62488-65

ACCESSION NR: AP5018031

50 mm H₂O head, centrifugal blower: 1200 rpm, 6410 m³/hr, 200 mm H₂O, piston pump: type UN41000, 535 rpm, 0-20 kg/cm², 85 liter/min. The OSV-2.5 has been successfully tested. Orig. art. has: 1 table and 2 figures.

ASSOCIATION: GSKB po mashinam dlya khimicheskoy zashchity rasteniy (GSKB for Machinery for Chemical Protection of Plants) +4,55

SUBMITTED: 00

ENCL: 01

SUB CODE: LS, IE

NO REF SOV: 000

OTHER: 000

Card 2/3

T. 62188-65

ACCESSION NR: AP5018031

ENCLOSURE: 01

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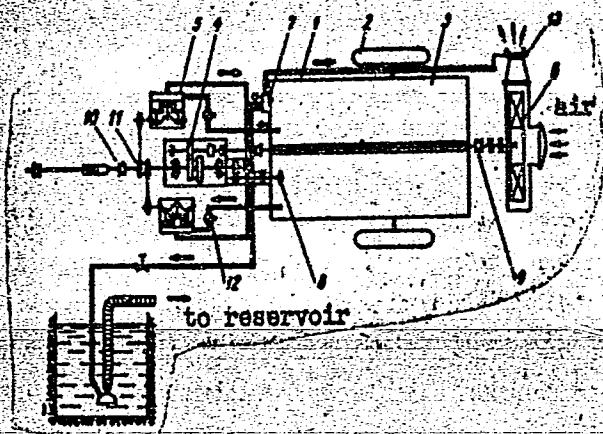


Fig. 1.
Schematic diagram of OSV-2.5

Card

3/3

NAGISHIMA, I.S.; KILHEMAN, S.I.

Reaction kinetics of formic acid dehydrogenation on nickel
catalysts. Kin. i kat. 6 no. 6:1020-1027 N-D '65
(NIRA 19:1)

1. Institut organicheskoy khimii imeni Zelinskogo AN SSSR.
Submitted July 5, 1963.

GULYAYEV, N.F., kandidat tekhnicheskikh nauk; LAVROV, A.A., sanitarnyy vrach; MAGIVINA, T.Ye., sanitarnyy vrach; NIKOLAYEVA, T.A., kandidat meditsinskikh nauk; FOKIN, D.T., sanitarnyy vrach

Imaginary errors in the sanitary protection of natural waters.
Gig. i san. 22 no.3:68-73 Mr '57. (MIRA 10:6)
(WATER SUPPLY
sanitary protection of water reservoirs in Russia)
(SANITATION
same)

NAGIYEV, A.

Life preservers for workers in offshore oil operations. Nov.neft.
tekh.: Nefteprom.delo no.6:44-45 '54. (MIRA 14:10)
(Life preservers) (Oil well drilling, Submarine)

NAGIEV, A.M.

4695. COMBATING THE FORMATION OF DUST DURING DECKING OF CRACKING
PLANTS. Nagiev, A.M. and Arslanov, F.A. (Trud. Vsesoyuz. nauch.-
 issled. inst. tekhn. bezopas., Minist. Neft. Prom. (Penc. inst. safety,
 Minist. Oil, Moscow), 1955, (8), 42-53; abstr. in Ref. Zh. Khim. (Ref. J.
 Chem., Moscow), 1956, (15), 49674). Successful tests are recorded of a
 mobile dust collecting plant on a lorry chassis. Dust-laden air is drawn
 through a cyclone, bubbled through waste petroleum products in 60 l. drums
 and passed through a filter of metal shavings 100 mm thick.

2/3
 JMB

NAGIYEV, A M.

FONGAUZ, M.

Book containing serious errors ("Safety measures for individuals
in the petroleum industry ." A.M.Nagiev. Reviewed by M.Fongauz).
Neft.khoz.33 no.7:92-93 J1'55. (MLRA 8:10)
(Petroleum industry--Safety measures) (Nagiev, A.M.)

NAGIYEV, A.M.; ARUSTAMOVA, F.A.

Controlling harmful gas escapes during the stopping of iron
pyrite roasting furnaces at the Frunze sulfuric acid plant.
Trudy VNIITB no.10:91-95 '58. (MIRA 15:5)
(Baku--Sulfuric acid industry--Safety measures) (Pyrite)

NACIYEV, A.M.; ARUSTAMOVA, F.A.

Decontamination of the atmosphere during the contact process.

Trudy VNIITB no.10:96-113 '58. (MIRA 15:5)

(Petroleum refineries--Safety measures) (Sulfur dioxide)

(Air--Purification)

NAGIYEV, A.M.

Air purification during oil-air contact. Azerb. neft. khoz. 37
no.3:31-34 Nr '58. (MIRA 11:8)

(Air—Purification)

HAGIYEV, A.M., kand. tekhn. nauk

The SVG spray burner for burning up used gases. Bezop. truda
v prom. 3 no. 2:36-37 F '59. (MIRA 12:2)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut po tekhnike
bezopasnosti v neftyanoy promyshlennosti.
(Burners)

NAGIYEV, A.M., inzh.; ESTRIN, R.Ya., inzh., ARZUMANOV, A.A. (Baku)

Safety engineering in coating pipelines with bituminous mastics.
Stroi. truboprov. 5 no.12:24 D '60. (MIRA 13:12)
(Pipelines) (Protective coatings)

NAGIYEV, A.M.

Controlling gas escape in the production of azolyat. Trudy
VNIITB no.13:75-82 '60. (MIRA 14:12)
(Azolyat)

NAGIYEV, G.

USSR/Cultivable Plants - Grains.

X-2

Res Jour : Ref Zhur - Biol., No 3, 1958, 10727

Author : Nagiyev, G., Aliyev, M.

Inst :

Title : How We Attained High Yields of Hybrid Corn Seed.

Orig pub : Sots. s. Kh. Azerbaydzhan, 1956, No 4, 18-22.

Abstract : No abstract.

Card 1/1

NAGIYEV G.

COUNTRY : USSR
 CATEGORY : Cultivated Plants. Forage Crops.
 ABS. JOUR. : RZhBiol., No. 23 1958, No. 104743
 AUTHOR : Nagiyev, G.; Yeritsyan, G.
 INST. : Azerbaydzhan Scientific Research Institute of Animal *)
 TITLE : Fodder Cabbage - A New Forage Crop in Azerbaydzhan.

ORIG. PUB. : Azerbaychen sotsyalist and t a rrufaty, 1958, No. 2, 38-41;
 Sots. s.-kh. Azerbaydzhsara, 1958, No. 2, 37-41
 ABSTRACT : The best varieties, dates and methods of the sowing have
 been determined at Azerbaydzhan Scientific Research Insti-
 tute of Animal Husbandry and Veterinary Science since 1954.
 The highest yielding variety is Listovaya mozgovaya sinyaya
 (895 centners/ha for 2 years). The best period of sowing
 into the ground is the last 10 days of February to the
 first 10 days of March. The method of sowing - square-hill
 45 x 45 centimeters with one plant to a hill. Cultivation
 by direct sowing into the ground is better than with
 *) Husbandry and Veterinary Science

Card: 1/2

81

NAGIYEV, G.M.

Ecology and summer and fall phenology of the common malaria mosquito
Anopheles maculipennis Mg. Var. *subalpinus* H.L. in the southeastern
maritime part of Azerbaijan [with summary in English]. Ent. oboz. 38
no.2:408-423 '59. (MIRA 12:7)

1. Institut zoologii AN AzSSR, Baku.
(Lenkoran Lowland--Mosquitoes)

NAGIYEV, G.M.

Distribution of bloodsucking mosquitoes (Diptera, Culicidae, Culicinae) in various landscape zones of the southeastern part of the Azerbaijan S.S.R. Ent.oboz. 40 no.3:541-553 '61.
(MIRA 15:3)

1. Institut zoologii AN AzSSR, Baku.
(Lenkoran Lowland—Mosquitoes)

NAGIYEV, G.M., Kani. shik. ruz. mark [revenue]; ALIYEV, T.A., Kani. shik. ruz. mark

Intigation of persons in connection. Temirela. ruz. shik. ruz. mark.
(402 17:4)

NAGIYEV, I.M.

Some characteristics of the course of the cutaneous form of anthrax.
Zhur. mikrobiol., epid. i immun. 32 no.9:138 S '61. (MIRA 15:2)

1. Iz bel'nitsy Dzhambeytinskogo rayona Zapadno-Kazakhstanskoy
oblasti.

(ANTHRAX)

BUKOV, A.S., kand.sel'skokhozyaystvennykh nauk; MANYGINA, N.Ye.;
LABAZNIKOV, B.V.; NAGIYEV, K.G.

Planting oak in clusters on irrigated lands in Azerbaijan.
Agrobiologiya no.6:899-904 N-D '62. (MIRA 16:1)

1. Azerbaydzhanskiy nauchno-issledovatel'skiy institut lesnogo
khozyaystva i agrolesomelioratsii, g. Barda.
(Azerbaijan—Oak) (Azerbaijan—Afforestation)

107-57-2-46/56

AUTHOR: Nagiyev, M. (Baku)

TITLE: Rewinding an Electric Soldering Iron. Experience Exchange
(Peremotka payal'nika. Obmen opytom)

PERIODICAL: Radio, 1957, Nr 2, p 52 (USSR)

ABSTRACT: A method of using small cuttings of mica, instead of sheet mica,
when rewinding . burnt-out electric soldering iron is suggested in the
article.

There is 1 figure in the article.

AVAILABLE: Library of Congress

Card 1/1

The calculation of ejectors. M. F. Nagiev. *Amerikantskaya Neftyanaya Khimiya* 1933, No. 1, 103-6.—
Various calculus are presented to define the efficiency of
steam ejectors used in vacuum stills. A. A. Bocktlang

22

Cracking calculations for heavy petroleum fractions.
 M. L. Nagiev. *Azerbaidzhanikoe Neftyanoe Khiz.* 1939.
 No. 10-11, 90-6. Development of a method of calcg.
 the cracking of heavy oil products on the basis of kinetic
 data and the heat of reaction of cracking. Development
 of a formula for calcg. the coeff. of recycling. Critical
 analysis of the Genesee and Reuter formula for the detn.
 of the const. of the cracking velocity (cf. C. A. 26, 1700)
 A. A. B.

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

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CA

Calculating the cracking of petroleum products. II
M. E. Nagiev. *Azerbaidzhanets Neftyanos Khos.* 1959.
No. 12, 31-32; C. A. 34, 3479. —The following items are
treated mathematically: detn. of the highest gasoline
yield, change of the recycling factor with temp. and pres-
sure, technology of the modern cracking process and detn
of the coeff. of combined recycling. A. A. Buchlingk.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

SECTION SYMBOLS

SECTION 1

SECTION 2

SECTION 3

SECTION 4

SECTION 5

SECTION 6

SECTION 7

SECTION 8

SECTION 9

SECTION 10

SECTION 11

SECTION 12

SECTION 13

SECTION 14

SECTION 15

SECTION 16

SECTION 17

SECTION 18

SECTION 19

SECTION 20

SECTION 21

SECTION 22

SECTION 23

SECTION 24

SECTION 25

SECTION 26

SECTION 27

SECTION 28

SECTION 29

SECTION 30

SECTION 31

SECTION 32

SECTION 33

SECTION 34

SECTION 35

SECTION 36

SECTION 37

SECTION 38

SECTION 39

SECTION 40

SECTION 41

SECTION 42

SECTION 43

SECTION 44

SECTION 45

SECTION 46

SECTION 47

SECTION 48

SECTION 49

SECTION 50

SECTION 51

SECTION 52

SECTION 53

SECTION 54

SECTION 55

SECTION 56

SECTION 57

SECTION 58

SECTION 59

SECTION 60

SECTION 61

SECTION 62

SECTION 63

SECTION 64

SECTION 65

SECTION 66

SECTION 67

SECTION 68

SECTION 69

SECTION 70

SECTION 71

SECTION 72

SECTION 73

SECTION 74

SECTION 75

SECTION 76

SECTION 77

SECTION 78

SECTION 79

SECTION 80

SECTION 81

SECTION 82

SECTION 83

SECTION 84

SECTION 85

SECTION 86

SECTION 87

SECTION 88

SECTION 89

SECTION 90

SECTION 91

SECTION 92

SECTION 93

SECTION 94

SECTION 95

SECTION 96

SECTION 97

SECTION 98

SECTION 99

SECTION 100

АВТОР: ДАНИЙЕЛ ПЕТРОВИЧ ДАНТЕВ, М.П., ред.

Эффективность комплексной переработки нефти
[нефтепродукты]. Эффективность комплексной переработки нефти
и нефтепродуктов. Баку: Изд-во Азербайджанской
СНХ, 1966. 131 с. (13А 1811)

MASTON, W. F.

Nadirey, A. P. - "On the theory of recirculation of air in the engine of a jet engine" (General theory of the coefficient of recirculation in the engine of a jet engine - industrial installations), Izvestiya Akad. Nauk Azerbaydz. SSR, 1961, No. 2, p. 15-19 - Russian in Azerbaydzian language.

SI: 1-3851, 16 June 53, (Isotopia World, English Edition, No. 5, 1953).

NAGIYEV, M. F.

Nagiyev, M. F. - "On the technology of dehydrogenation catalysis. Taking into account the reaction kinetics in working out the technology of the process and in designing industrial equipment", Izvestiya Akad. nauk Azerbaidzhan. SSR, 1953, No. 11, p. 11-19, (Resume in Azerbaidzhi).

SC: V-3 42, 11 March 53, (Letopis 'Zhurnal'nyi Starik, No. 6, 1953).

1. The first part of the document is a list of the names of the persons who were present at the meeting. The names are listed in alphabetical order. The names are: [illegible]

7

J

THERMODYNAMIC CALCULATIONS OF PETROLEUM REFINERY PROCESSES AND DATA ON CHEMICAL COMPOUNDS. (TERMODINAMICHESKIE RASCHETY P O'SESSOV PERE ABOTKI NEFTI I DANNYE PO SVOISTVAM KHIMICHESKIKH SCDINENIE). Nagiev, M.F. (Baku, Leningrad: Gostortekhnizdat, 1950, 219pp.; title in Recent Accessions, Brit. Museum).

1ST AND 2ND ORDERS										3RD AND 4TH ORDERS									
PROCESSING AND PROPERTIES INDEX																			
<p>F</p> <p>3173. THEORY OF RECYCLING PROCESSES IN PETROLEUM TECHNOLOGY.</p> <p>Nagiev, M. P. (Doklady Akad. Nauk S.S.S.R. (Rep. Acad. Sci. U.S.S.R.).</p> <p>1 Aug. 1950, vol. 73, (4), 783). (L).</p>																			
<p>ASAC-ELA METALLURGICAL LITERATURE CLASSIFICATION</p>																			
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PA 192135

USSR/Chemistry - Petroleum
Conversion Mar/Apr 51

"Bibliography. New Books. M. F. Nagiyev's
'Thermodynamic Calculations of Petroleum Conver-
sion Processes and Data on the Properties of
Chemical Compounds,'"

"Uspekh Khim" Vol XX, No 2, pp 263, 264

Chap 1 sets forth elements of chem thermodynami-
cs; Chap 2 treats dependence between equilib-
rium and constant pressure potential for actual
systems involving any aggregate state; Chap 3 is

192135

USSR/Chemistry - Petroleum
Conversion (Contd) Mar/Apr 51

devoted to determination of favorable conditions for
course of chem reactions; Chap 4 contains de-
scription of thermodynamic properties and phys-
icochemical constants of chem compounds. Manual cites many calcu-
lation examples from chemistry of petroleum conversion
and includes about 50 tables containing a variety of
reference material essential for thermodynamic
calculations of equilibrium of chem reactions. Published by
Gostoptekhnizdat, Baku/Leningrad, price R 23.70.

192135

NAGIYEV, M. F.

NAGIYEV, M. F.

USSR/Chemistry - Catalytic Cracking

Jan 51

"Kinetics of Catalytic Cracking," M. F. Nagiyev,
Petroleum Inst, Baku

"Zhur Fiz Khim" Vol XXV, No 1, pp 29-40

Developed theory of kinetics of heterogeneous catalytic cracking which permits calcn of kinetics of simultaneous conversion of complex mixt of hydrocarbons in either presence or absence of unreacting substances. Also developed new method for detn of adsorption coeff for heterogeneous catalysis of multicomponent syst.

180T13

LC

NAGIYEV, M. F.

USSR/Chemistry - Kinetics

21 Sep 51

"The Theoretical Basis of Kinetics of Gas Reactions in a Stream," M. F. Nagiyev

"Dok Ak Nauk SSSR" Vol LXXX, No 3, pp 397-400

Discusses the rate of a continuous gas reaction at any given cross section of the reaction tube. Derives a formula relating the time of reaction with the vol rate and vol of the app.

210T34

AF653641

TREASURE ISLAND BOOK REVIEW

AID 774 - M

NAGIYEV, M. F.

TOPLIVA DLYA DVIGATELEY SOVREMENNOY TEKHNIKI (Fuels for Modern Engines). Baku, Aznefteizdat, 1954. 130 p., tables, diagrs. 28 refs. (23 Russian, 1934-1953)

The book is intended for engineers and technicians of the petroleum industry, and workers in scientific research institutes investigating oil processing and treatment. The book is interesting because it is based mainly on Soviet literature and experience, and is an attempt at the systematization of the available materials on the subject. Various types of fuels and their behavior in modern gas, gasoline, diesel and jet-propulsion engines are discussed. The behavior of individual hydrocarbon and petroleum fractions is examined, and the possibilities for the development of motor-fuel production and the improvement of fuel quality are discussed. This is in conformity with the recommendations of the 19th Party Congress for the increased and improved processing of oil products especially motor fuels for the next Five-Year-Plan. The principles of the engine performance with various fuel types are first examined. An analysis of engine performance follows, with an equation for efficiency, and the

1/6

AID 774 - M

NAGIYEV, M. F., *Topliva dlya dvigateley*. . .

conditions which increase efficiency are determined. Then the most efficient fuels and their properties are discussed. The book is provided with many tables and diagrams.

Chapter I. Fuels for Gas and Gasoline Engines (p. 6-55)
General information on engine performance, Otto cycle, thermal efficiency, fuel properties and requirements. Knock rating and use of antidetonators. Effect of compression rate on automobile carburetor engine efficiency (table). Critical compression rate of: alkanes (octanes, heptanes, isooctanes, etc.); alkenes; cyclanes (cyclopropanes, cyclobutanes, cyclopentanes, cyclohexanes); aromatic hydrocarbons; alkadienes and ethines, and bicyclic hydrocarbons. Effect of the cycle on the antiknock properties of cyclic hydrocarbons. (11 diagrs.) Standard methods of evaluating knock quality. Testing according to the motor method (GOST 511-46) for automobile fuels, temperature method (GOST 3337-48) and indicator method (GOST 3338-46) for modern aircraft fuels, table (p. 33), diagrs. Antiknock characteristics of fuels in conformity with accepted standards. Octane numbers of various kinds of hydrocarbons (tables). Table of octane ratings of Soviet gasolines and alcohols (p. 40-41).

2/6

AID 774 - M

NAGIYEV, M. F., Topliva dlya dvigateley. . .

Antiknock compounds (Table p. 43). Composition of ethyl liquid (OST 400-33). Table p. 45. Effect of tetraethyl lead on the antiknock properties of hydrocarbons. Carburetted properties of fuels. Results of N. V. Brusyantsev's tests. Corrosive effect, deposit and scale formation, stability and freezing point of fuels. Negative effect of water on fuels.

Chapter II. Fuels for Diesel Engines (57-89). Advantages and defects of diesel engines. Types of diesel engines. Ideal and actual cycles. Flow diagram of a four-stroke diesel engine. Diagrams of the Diesel Otto and Sabathé cycles. Thermal efficiency. Properties required of diesel fuels. Main qualitative indices of diesel fuels and their effect on engine performance. Effects of the cetane number on: specific fuel consumption (table), and on fuel performance (diagr.) Evaluation of the ignitability of fuels. Dependency of the diesel fuel constants on the boiling point of hydrocarbons. Cetane numbers of individual hydrocarbons and their dependence on the number of carbon atoms in the molecule (3 diags.). Cetane numbers of diesel fuels processed from petroleum (2 tables). Properties of diesel fuels affecting the normal performance of fuel-feeding devices and filters, as well as the quality of the

3/6

AID 774 - M

NAGIYEV, M. F., Topliva dlya dvigateley. . .

fuel-air mixture formation. Dependency of fuel viscosity on temperature, according to data of P. I. Sanin and N. V. Melent'yeva (diagr.) Melting point of hydrocarbons of a mostly normal structure (diagr.) Fuel properties ensuring long and reliable performance of engines. Basic types of modern diesel fuels and their standard properties (table) Five kinds of Soviet distillate fuels for high-speed diesel engines: 1) solar oil (GOST 1666-42); 2) Arctic DA diesel fuel for operation at air temperatures below -30°C , 3) DZ winter diesel fuel for air temperatures over 30°C , 4) DL summer diesel fuel air temperatures over 0°C , and 5) DS special diesel fuel (GOST 4749-49). (table, p. 84) Three kinds of Soviet residual fuels (motor fuels) for low-speed diesel engines: M3, M4, M5 (table, p. 85). Soviet methods for improving the quality of diesel fuels. Evaluation of the efficiency of chemical additives for increasing the cetane number (table). Effect of additives on various fuel types (table). Effect of ethyl ether concentration on the starting properties of diesel fuels (N. A. Rogozin's data); effect of ethyl ether additives on the solidification temperature of diesel fuels. Tables (p. 88).

4/6

NAGIYEV, M. F., Topliva dlya dvigateley. . .

AID 774 - M

Chapter III. Fuels for Jet Propulsion Aviation (p. 90-127). General concepts and classification of jet propulsion engines. (ZhRD). Flow diagram, p. 93. Importance of the heating capacity of fuels. Jet engines (VRD). Turbo-jet engines (TRD). Flow diagrams, p. 96. General characteristics of individual types of jet propulsion engines and their special features. Comparative study of the efficiency of ZhRD, VRD and TRD. Heat balance of a jet engine (diagr., p. 100). Fuels and oxidizing agents for liquid-propellant jet engines. Eight general fuel requirements. Basic types of liquid fuels and their properties (table). Oxidizers and their properties; basic data on oxidizers in mixture with toluene (2 tables). Methods for increasing the heating value of liquid fuels. Effect of the addition of beryllium on the heating efficiency of kerosene and nitric acid mixture (table). Fuels for jet engines. Solidification point. Fourteen fuel requirements for gas turbo-jet engines. Number of possible isomers of alkanes in gas-turbine fuels, 65-300°C boiling point (table, p. 107). Properties of hydrocarbon fuels. Various phases of fuel performance in gas turbines (table, p. 108). Density, solidification point, viscosity, specific thermal capacity, latent heat of evaporation, heating value, and carbon

5/6

AID 774 - M

NAGIYEV, M. F., Topliva dlya dvigateley. . .

content of hydrocarbons as dependent on their boiling point.
Surface tension of various hydrocarbons as dependent on their
specific gravity. Ignition, self-ignition. Range of the air-
fuel ratio. Combustion speed. Permissible range of the properties
of hydrocarbon fuels for aircraft gas turbines. (Tables, diagrs.)
Use of oil fuel in the combustion chamber of aircraft jet engines.
Economy of fuel and efficient combustion. Dependence of the
combustion efficiency on the air-fuel ratio. Relation between
the amount of heat liberated per unit volume and unit weight by
various fuel types to the flight altitude. Combustion stability.
Deposits in the combustion chamber. (Table, diagrs.) Possibilities
of producing special types of oil fuels for aircraft gas turbines
by synthesis or other transformation processes. Fuels boiling
away at the 65° - 300°C temperature range. Possibility of using
alkene hydrocarbons as components of fuels for aircraft gas
turbines, which should be suited for any type of fuel.

6/6

NAGIYEV, M.F.

USSR/Chemistry - Book review

Card 1/1 Pub. 147 - 24/27

Authors : Moiseyev, S.D.

Title : About the M.F. Nagiev report entitled, "Gas Dynamics of a Chemically Reacting Flow."

Periodical : Zhur. fiz. khim. 28/2, 359-361, Feb 1954

Abstract : In reviewing the book by M.F. Nagiev entitled, "Gas Dynamics of a Chemically Reacting Flow," the author points out that the rate of the chemical reaction should be defined as a complete derivative of the amount of the reacted substance according to time per unit of volume or as the amount of the reacted substance per unit of time : unit of volume. The M. F. Nagiev and D. I. Orochko determination of the rate of reaction, as a complete derivative of the concentration of one of the components according to time, was found by the reviewer as theoretically baseless and far from the experimental facts. Four USSR references (1948-1952).

Institution : The M.V. Lomonosov State University, Moscow

Submitted : March 2, 1953

NAGIYEV, M.F.: TOPCHIYEV, A.V., akademik, redaktor; EMANUEL', N.M., doktor khimicheskikh nauk, redaktor; ZELENIKOVA, Ye.V., tekhnicheskiiy redaktor

[Chemistry, technology and computation of the processes of synthesis in motor fuels] Khimiya, tekhnologiya i raschet protsessov sinteza motornykh topliv. Moskva, Izd-vo Akademii nauk SSSR, 1955.
542 p. (MLBA 8:7)

(Motor fuels)

NAGIYEV, M.F.

1478. REPEATED THERMAL CRACKING OF CRACKED SOLAR OIL TO OBTAIN PRODUCTS OF MEDIUM FRACTIONAL COMPOSITION. Nagiev, M.F., et al. (Izv. Akad. Nauk Azerb. (Bull. Acad. Sci. Azerb. S.S.R.), 1955, (11), 3-11; abstr. in Ref. Zh. Khim. (Ref. J. Chem., Moscow), 1957, (12), 42151). Some experiments on products of Baku crudes are recorded. The residue from each cracking is cracked again. It is calculated that fourteen cycles would produce a yield of 6% clear products.

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~~NAGIYEV, M. F.~~ NAGIYEV, M. F.

Thermal cracking of heavy naphtha-residues. M. F. Nagiev and I. I. Shakhmatovskii. Izvest. Akad. Nauk Azerbaidzhan. S.S.R. 1956, No. 1, 3-21 (in Russian).— Comparative cracking expts. were carried out on three feed stocks for 20-50 min. at 420-5° and 3 atm. pressure. The feed stocks used were heavy fuel oil, the propane-propylene deasphaltized residue from low-temp. cracking of heavy fuel oil, and the same residue after deasphalting with the liquefied butane-propane fraction of natural gas. M. Z.

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Jan 1957

NAGIYEV, M.F.

Training scientific personnel in the field of applied sciences.
Izv.AN Azerb.SSR no.1:123-128 Ja '56. (MLRA 9:7)
(Technology) (Science)

USSR/Kinetics - Combustion. Explosions. Topochemistry. Catalysis. B-9

Abs Jour : Referat Zhur - Khimiya, No 6, 1957, 18561

Author : M.F. Nagiyev, Z.G. Petrova, A.I. Sultanova.
Inst : Academy of Sciences of Azerbaijan SSR; Academy of Sciences of USSR.

Title : Study of Kinetics of Homogeneous Decomposition Reaction of Alkyl Nitrites (Propyl Nitrites and Butyl Nitrites).

Orig Pub : Izv. AN AzerbSSR, 1956, No 2, 11-30; Dokl. AN SSSR, 1956, 109, No 3, 573-575

Abstract : The kinetics of the thermal homogeneous decomposition of propyl nitrite and butyl nitrite at 200 to 240° was studied by pressure changes measured with a metallic membrane with resistance wire tensometers switched into an oscillograph circuit. It was found that the decomposition of both the compounds occurs according to the 1st order. The speed constants of the reaction (sec⁻¹) are $k = 1.6 \times 10^{13} \exp[-34700/RT]$ for propyl nitrite and $k = 4.53 \times 10^{13} \exp[-36200/RT]$ for butyl nitrite.

Card 1/1

- 232 -

NAGIYEV, M.F.; KARAMZIN, P.V.

Developing a method for the integration of experimental data on
heat transmission in devices with complex extratubular space
and its practical application. Izv. AN Azerb.SSR no.4:33-46
Ap '56. (MLRA 9:10)

(Heat--Transmission)

NAGIYEV, M.F.; KARAMZIN, P.V.

New classification of heat-exchanging apparatus and a systematic
arrangement of experimental factors of heat transfer. Izv.AN Azerb.
SSR no.8:61-71 Ag '56. (MLBA 9:11)
(Heat exchangers)

NAGIEV, M. F.

3
The development of theories of recycling processes.
M. F. Nagiev, T. N. Shekhtinskii, and P. V. Karamzin.
Izv. Akad. Nauk Azerbaidzhan S.S.R. 1956, No. 12, 23-33
(in Russian); cf. Doklady Akad. Nauk Azerbaidzhan S.S.R.
2, No. 8 (1948).--Derived equations are given for the over-
all material balance of complex and interconnected chem.
processes and for the detn. of the total charge or charges of
separate components for each reactor or series of reactors.
Two groups of processes are distinguished in org. syntheses
and in the petroleum industry. In the first group are processes
where changes of the compn. of raw materials change
only the yield of products. Processes of the second type are
those in which the presence of a definite number of components
is required.
M. Charmandarian